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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/839,565	04/20/2001	William McFarland	P 0269521 ATH-025(u)	1458
27498	7590	02/08/2005	EXAMINER	
PILLSBURY WINTHROP LLP 2475 HANOVER STREET PALO ALTO, CA 94304-1114			ODOM, CURTIS B	
			ART UNIT	PAPER NUMBER
			2634	

DATE MAILED: 02/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/839,565	<b>Applicant(s)</b> MCFARLAND, WILLIAM	
	<b>Examiner</b> Curtis B. Odom	<b>Art Unit</b> 2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-92 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-92 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-25 and 79-92, drawn to changing a symbol rate and number of carriers during communication between a transmitter and receiver, classified in class 375, subclass 260.
  - II. Claims 26-32, drawn to using a predetermined channel characteristic to select a specific number of carriers and symbol rate from a plurality of symbol rates and carriers before transmission, classified in class 375, subclass 260.
  - III. Claims 33-50, drawn to analyzing a sounding signal to select a number of carriers and symbol rate for communication between a transmitter and a receiver, classified in class 455, subclass 67.11.
  - IV. Claim 51 drawn to determining interfering signals by listening to a channel for a period of time and using this information to select a number of carriers and symbol rate for communication, classified in class 455, subclass 67.14.
  - V. Claims 52-71, drawn to selecting a number of carriers and symbol rate for communication on a packet to packet basis, classified in class 370, subclass 913.
  - VI. Claims 72-75, drawn to selecting a symbol rate and number of carriers for communication based on a legacy number of carriers and legacy symbol rates, classified in class 370, subclass 466.

VII. Claims 76-78, drawn to determining a maximum number of carriers and a maximum symbol for communication based on the channel conditions and using this information to select a number of carriers and symbol rate for communication, classified in class 375, subclass 225.

2. The inventions are distinct, each from the other because of the following reasons: Group I refers to changing a symbol rate and number of carriers during communication between a transmitter and receiver. Group II refers to using a predetermined channel characteristic to select a specific number of carriers and symbol rate from a plurality of symbol rates and carriers before transmission. Group III refers to analyzing a sounding signal to select a number of carriers and symbol rate for communication between a transmitter and a receiver. Group IV refers to determining interfering signals by listening to a channel for a period of time and using this information to select a number of carriers and symbol rate for communication. Group V refers to performing transmission operations on a packet-by-packet basis. Group VI refers to selecting a symbol rate and number of carriers for communication based on a legacy number of carriers and legacy symbol rates. Group VII refers to determining a maximum number of carriers and a maximum symbol for communication based on the channel conditions by testing the channel using different data rates and using this information to select a number of carriers and symbol rate for communication.

2. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

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3. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II (since Group II is based upon a predetermined channel characteristic), restriction for examination purposes as indicated is proper.


***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Curtis B. Odom whose telephone number is 571-272-3046. The examiner can normally be reached on Monday- Friday, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571-272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Curtis Odom  
January 25, 2005



**STEPHEN CHIN**  
**SUPERVISORY PATENT EXAMINER**  
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